

WHAT IS CLAIMED IS:

1. Disk array controller comprising:
 a host switch interface section that is connected to a
 host computer;

5 a plurality of respective disk array controlling units
 that are provided with a channel interface section interfacing
 with said host switch interface section, a disc interface section
 that is connected to a magnetic disc unit and a cache memory
 section that temporarily stores data as read out of or written
 into said magnetic disc unit; and

a mutual connection network in connection with the channel
 interface sections, the disc interface sections and the cache
 memory sections of said disk array controlling units,

wherein said cache memory sections perform a transfer of
 the data with the channel interface sections of said respective
 disk array controlling units.

2. Disk array controller according to claim 1 wherein
 said host switch interface section is provided with a management
 table that selects a path of the data transfer according to an
 address as requested by the host computer.

3. Disk array controller according to claim 2 wherein
 said data transfer path is a path between said host switch
 interface section and the channel interface sections of said
 respective disk array controlling units.

4. Disk array controller according to claim 2 wherein

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said management table is provided with a path selection table
 with candidates for the data transfer paths in response to said
 address and a history information table in which the respective
 data transfer paths are weighted according to a data volume
 thereof, wherein the specific path is selected on the basis of
 information of said history information table among the paths
 as selected by said path selection table.

5. Disk array controller according to claim 1 wherein
 one part of the respective disk array controlling units are
 provided with higher-speed cache memory sections than those of
 the other part thereof.

6. Disk array controller according to claim 2 wherein
 said respective disk array controlling units are provided with
 a resource management section that manages an operating ratio
 of the resources thereof and reports said operating ratio through
 an operating ratio report signal to said host switch interface
 section, wherein said management table is provided with a path
 selection table with candidates for the data transfer paths in
 response to said address and a history information table in which
 the respective data transfer paths are weighted based on said
 operating ratio report signal, wherein the specific path is
 selected based on information of said history table among the
 paths as selected by said path selection table.

7. Disk array controller comprising:

a host switch interface section that is connected to a

host computer;

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5 a plurality of respective disk array controlling units that are provided with a channel interface section interfacing with said host switch interface section, a disc interface section that is connected to a magnetic disc unit and a cache memory section that temporarily stores data as read out of or written into said magnetic disc unit;

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10 a first connection network in connection with the channel interface sections, the disc interface sections and the cache memory sections of said respective disk array controlling units; and

15 a second mutual connection network in connection with said host interface section and the channel interface sections of said respective disk array controlling units,

wherein said cache memory sections perform a transfer of the data with the channel interface sections of said respective disk array controlling units.

20 8. Disk array controller according to claim 7 wherein said host switch interface section is provided with a management table to select a path of the data transfer according to an address as requested by the host computer..

25 9. Disk array controller according to claim 8 wherein said data transfer path is a path between said second mutual connection network and the channel interface sections of said respective disk array controlling units.

10. Disk array controller according to claim 8 wherein said management table is provided with a path selection table with candidates for the data transfer paths in response to said address and a history information table in which the respective data transfer paths are weighted according to a data volume thereof, wherein the specific path is selected according to information of said history table among the paths as selected by said path selection table.

11. Disk array controller according to claim 7 wherein one part of the disk array controlling units are provided with higher-speed cache memory sections than those of the other part thereof.

12. Disk array controller according to claim 8 wherein the respective disk array controlling units are provided with a resource management section that manages an operating ratio of the resources thereof and reports said operating ratio through an operating ratio report signal to said host switch interface section, wherein said management table is provided with a path selection table with candidates for the data transfer paths in response to said address and a history information table in which the respective data transfer paths are weighted according to said operating ratio report signal, wherein the specific path is selected according to information of said history table among the paths as selected by said path selection table.